DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

Claim 27 is rejected under 35 U.S.C. 101 because the algorithm claimed does not

transform an <u>article or physical object</u> to a different state or thing, or otherwise produce a useful,

concrete and <u>tangible</u> result. The method must be tied to another statutorily patentable class. See

MPEP § 2106 IV B for further explanation.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-

statutory subject matter. This claim includes a "computer program product" which does not

exclude a transitory, propagating signal. A transitory, propagating signal is not a process,

machine, manufacture, or composition of matter. Thus, such a signal cannot be patentable

subject matter. See MPEP § 2106 IV B for further explanation.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

3.   **Claims 1-11, 18-20, 23, 24, 27, and 28 are rejected under 35 U.S.C. 102(b) as being**

anticipated by Japan Patent Publication 2000-244872 (Kazuo et al.).

4.   **In regard to claim 1**, Kazuo et al. disclose a transcoder for a variable length coded data

stream comprising: a receiver for receiving the variable length coded data stream comprising

variable length coded coefficients (paragraph 18); a significance processor for determining if

variable length coded coefficients are significant coefficients or less significant coefficients in

accordance with a significance criterion (paragraph 27); a truncation processor for truncating the

less significant coefficients (paragraph 27); an encode processor for generating a transcoded data

stream comprising significant coefficients and truncated less significant coefficients (paragraph

36).

5.   **In regard to claim 2**, Kazuo et al. disclose the transcoder as claimed in claim 1 wherein

the truncation comprises setting a value of the less significant coefficients to zero. (paragraph 32)

6.   **In regard to claim 3**, Kazuo et al. disclose the transcoder as claimed in claim 1 wherein

the significance criterion comprises a criterion of whether a value of a variable length coded

coefficient is above a threshold. (paragraph 35)

7.   **In regard to claim 4**, Kazuo et al. disclose the transcoder as claimed in claim 1 wherein

the significance criterion is determined in response to an associated frequency parameter of a

signal encoded by the variable length coded stream. (paragraph 34)

8.   **In regard to claim 5**, Kazuo et al. disclose the transcoder as claimed in claim 1, wherein

the variable length coded coefficients are run length coded and wherein the significance criterion

comprises a criterion of whether a run length of a sequence of variable length coded coefficients

is above a threshold. (paragraph 34-35)

9.   **In regard to claim 6**, Kazuo et al. disclose the transcoder as claimed in claim 1, wherein the variable length coded coefficients are run length coded and wherein a run length value of a significant coefficient is modified to reflect increased zero coefficients resulting from truncation of less significant coefficients to a zero value. (paragraph 34-35)

10.   **In regard to claim 7**, Kazuo et al. disclose the transcoder as claimed in claim 1 further comprising a subset processor for providing a subset of the variable length coded data stream to the encode processor; and wherein the encode processor is operable to directly include the subset of the variable length coded data stream in the transcoded data stream. (paragraph 19)

11.   **In regard to claim 8**, Kazuo et al. disclose the transcoder as claimed in claim 7 wherein the subset of the variable length coded data stream comprises variable length coded coefficients associated with low frequency parameters of a signal coded by the variable length coded stream. (paragraph 34)

12.   **In regard to claim 9**, Kazuo et al. disclose the transcoder as claimed in claim 7 wherein the subset of the variable length coded data stream comprises control data.

13.   **In regard to claim 10**, Kazuo et al. disclose the transcoder as claimed in claim 7 wherein the subset of the variable length coded data stream comprises variable length coded coefficients associated with motion compensation parameters of a video signal coded by the variable length coded stream. (paragraph 43)

14.   **In regard to claim 11**, Kazuo et al. disclose the transcoder as claimed in claim 7 wherein the subset of the variable length coded data stream comprises header data. (paragraph 19)

15.   **In regard to claim 18,** Kazuo et al. disclose the transcoder as claimed in claim 1 wherein

the variable length coded coefficients comprise quantized Discrete Cosine Transform

coefficients of a compressed video signal. (paragraph 40)

16.   **In regard to claim 19,** Kazuo et al. disclose the transcoder as claimed in claim 1 wherein

the encode processor is operable to generate a scalable signal data stream comprising the

transcoded data stream as a base layer and at least one additional enhancement layer. (paragraphs

42-45)

17.   **In regard to claim 20,** Kazuo et al. disclose the transcoder as claimed in claim 19

wherein the truncation processor is operable to generate remainder coefficient values associated

with the truncation of the less significant coefficients, and the at least one additional

enhancement layer comprises at least some of the remainder coefficient values. (paragraphs 42-

45)

18.   **In regard to claim 23,** Kazuo et al. disclose an encoder for encoding a signal

comprising: a signal encoder for generating a variable length coded data stream from the signal

(paragraphs 18-19); the variable length coded data stream comprising variable length coded

coefficients (paragraph 18); a significance processor for determining if variable length coded

coefficients are significant coefficients or less significant coefficients in accordance with a

significance criterion (paragraph 27); a truncation processor for truncating the less significant

coefficients and for generating remainder coefficient values associated with the truncation of the

less significant coefficients (paragraph 27); and an encode processor for generating a scalable

signal data stream comprising a base layer comprising significant coefficients and truncated less

significant coefficients and an enhancement layer comprising at least some of the remainder

coefficient values (paragraphs 42-45).

19.   **In regard to claim 24**, Kazuo et al. disclose a decoder for decoding a scalable content

signal data stream; the decoder comprising: a receiver for receiving the sealable content signal

data stream (paragraph 45); the scalable content signal data stream comprising a base layer

comprising significant coefficients and truncated less significant coefficients, and an

enhancement layer comprising remainder coefficient values associated with the truncated-less

significant coefficients (paragraphs 42-45); a combine processor for generating a combined data

stream from combining the variable length coded coefficients and truncated less significant

coefficients of the base layer and the remainder coefficient values of the enhancement layer

(paragraph 43); and a decode processor for generating a decoded signal in response to the

combined data stream (paragraph 45). The transcoder disclosed by Kazuo et al. necessarily has a

decoder of complimentary structure.

20.   **In regard to claim 27**, Kazuo et al. disclose a method of transcoding of a variable length

coded data stream, the method comprising the steps of: receiving the variable length coded data

stream comprising variable length coded coefficients (paragraph 18) determining if variable

length coded coefficients are significant coefficients or less significant coefficients in accordance

with a significance criterion (paragraph 27); truncating the less significant coefficients

(paragraph 27); and generating a transcoded data stream comprising significant coefficients and

truncated less significant coefficients (paragraph 36).

21.   **In regard to claim 28**, Kazuo et al. disclose method according to claim 27. Claim 24

merely recites a computer program product which carries out this method. See above for

rejection rationale.

        The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

22.   **Claims 25 and 26 rejected under 35 U.S.C. 102(e) as being anticipated by U.S.**

Patent Application 10/167,747 (Walpole et al.) published as U.S. Pre-Grant Publication

2003/0233464.

23.   **In regard to claim 25**, Walpole et al. disclose a decoder for decoding a variable length

coded data stream; the decoder comprising: a receiver for receiving a variable length coded data

stream (paragraph 75) comprising variable length coded coefficients having shifted coefficient

values; and a shift processor for generating a shift compensated data stream by performing an

inverse shifting operation on the variable length coded coefficients having shifted coefficient

values (paragraph 84); and a decode processor for generating a decoded signal in response to the

shift compensated data stream. The transcoding system disclosed by Walpole et al. necessarily

has a decoder of complimentary structure.

24.   **In regard to claim 26,** Walpole et al. disclose the decoder as claimed in claim 25 further

comprising a shift value receiver for receiving a shift value parameter associated with the shifted

coefficient values and wherein the inverse shifting operation is determined in response to the

shift value parameter. (paragraph 84)

Claim Rejections - 35 USC § 103

25.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

26.   **Claims 12-17, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Kazuo et al. in view of U.S. Patent Application 10/167,747 (Walpole et al.) published as

U.S. Pre-Grant Publication 2003/0233464.

27.   Kazuo et al. disclose the transcoders of claims 1 and 19, but fail to disclose the

limitations of the transcoders of claims 12 and 21. Walpole et al. disclose a system of priority

streaming of video data including a transcoder substantially similar to that of Kazuo et al. It

would have been obvious to one of ordinary skill in the art at the time of invention to combine

these references as they both disclose variable-length encoding. One would have been motivated

to combine these references with a reasonable expectation of success in order to produce a

more-flexible and better-equipped transcoder.

28.   **In regard to claim 12,** Walpole et al. disclose a truncation processor which is operable to

perform a diminution operation on values of the significant coefficients. (paragraph 84)

29.   **In regard to claim 13**, Walpole et al. disclose the transcoder of claim 12 wherein the

diminution operation is a shifting operation. (paragraph 84)

30.   **In regard to claim 14**, Walpole et al. disclose the transcoder as claimed in claim 12

wherein the diminution operation depends on an associated frequency parameter of a signal

encoded by the variable length coded stream. (paragraph 75)

31.   **In regard to claim 15**, Walpole et al. disclose the transcoder as claimed in claim 12

wherein the diminution operation depends on a run length associated with at least one variable

length coded coefficient. (paragraph 75)

32.   **In regard to claim 16**, Walpole et al. disclose the transcoder as claimed in claim 12

wherein a diminution operation parameter is depending on a plurality of coefficient values of the

significant coefficients. (paragraph 84)

33.   **In regard to claim 17**, Walpole et al. disclose the transcoder as claimed in claim 12

wherein a diminution operation parameter depends on an achievable word length reduction for at

least one of the significant coefficients. (paragraph 84)

34.   **In regard to claim 21**, Walpole et al. disclose a transcoder wherein the truncation

processor is operable to perform a shifting operation on the significant coefficients and to

generate remainder coefficient values associated with the shifting operation (paragraph 84); and

the at least one additional enhancement layer comprises at least some of the remainder

coefficient values (paragraph 83).

35.   **In regard to claim 22**, Walpole et al. disclose the transcoder as claimed in claim 21

wherein the truncation processor is further operable to perform a second shifting operation on the

remainder coefficient values and to generate second remainder coefficient values, and the

encoding processor is operable to include at least some of the second remainder coefficient

values in a second enhancement layer. (paragraph 11)

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jared Beltowski whose telephone number is (571) 270-7120. The

examiner can normally be reached on Monday-Friday, 7:30 am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thai Tran can be reached on (571) 272-7382. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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